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CLAIMS

1. (original) A method of producing nanoparticles using a continuous flow miniaturised reaction vessel.

2. (currently amended) [A] The method [as-claimed-in] of claim 1 wherein [the-reaction volume-of] the reaction vessel [is] has a reaction volume of from 1×10^{-5} to 1×10^{-11} litres.

3. (currently amended) [A] The method [as-claimed-in] of claim 1 [or-claim-2 characterised-in-that] wherein a reactant is continuously supplied to the reaction vessel and the nanoparticles produced [thereby] by the reaction vessel are continuously removed therefrom.

4. (currently amended) [A] The method [as-claimed-in-any-one] of [claims] claim 1 [to-3 for the production of cadmium sulphide nanoparticles] comprising combining an aqueous solution of a cadmium salt and a sulphide salt in the continuous flow miniaturized reaction vessel to produce a plurality of cadmium sulphide nanoparticles.

5. (currently amended) [A] The method [as-claimed-in-any-one] of [claims] claim 1 [to-4] wherein a stabiliser is added after the formation of the nanoparticles.

6. (currently amended) [A] The method [as-claimed-in-any-one] of [claims] claim 1 [to-5] wherein the nanoparticles produced by the [method] reaction vessel are monodisperse.

7. (currently amended) [A] The method [as-claimed-in-any-one] of [claims] claim 1 [to-5] wherein a spatial variation in [the] at least one reaction [conditions] condition is established within the reaction vessel.

8. (currently amended) [A] The method [as-claimed-in] of claim 7 wherein [the] at least one reaction condition varied is [selected from one or more of] at least one of reagent

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concentration, pH, temperature, ~~[or]~~ and intensity of optical illumination provided at varying concentrations.

9. (currently amended) [A] The method ~~[as claimed in claim 7 or]~~ of claim 8 wherein the nanoparticles produced are of varying sizes.

10. (currently amended) A nanoparticle produced by the method of ~~[any one of claims]~~ claim 1 ~~[to 9]~~.

11. (currently amended) A miniaturised nanoparticle production device comprising at least one ~~[or more inlets]~~ inlet, a reaction chamber and at least one ~~[or more outlets]~~ outlet.

12. (currently amended) [A] The miniaturised nanoparticle production device ~~[as claimed in]~~ of claim ~~[12]~~ 11 arranged to produce a variation in the reaction conditions across the reaction ~~[vessel]~~ chamber.

13. (currently amended) [A] The miniaturised nanoparticle production device ~~[as claimed in]~~ of claim ~~[12]~~ 11 arranged to produce a variation in at least one ~~[or more]~~ of reagent concentration, pH, temperature, or intensity of optical illumination.